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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/600,145	07/10/2000	HIROKI NAKAHARA	9319S-000137	7749

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EXAMINER

DUONG, THOI V

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 02/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/600,145

Applicant(s)

NAKAHARA ET AL.

Examiner

Thoi V Duong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 ~~is~~ are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 ~~is~~ are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 8. 6) ☐ Other:

DETAILED ACTION

1. This office action is in response to the Amendment, Paper No. 9 , filed December 16, 2002.

Accordingly, claims 1-7 were amended. Currently, claims 1-16 are pending in this application.

Claim Objections

2. Claim 1 is objected to because of the following informalities: in line 15 of the claim, "a first portion flaking" should be --a first portion flanking--. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, 7-14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 56-20927 (JP'927) in view of JP 3-59623 (JP'623).

As shown in Fig. 1, JP'927 discloses a liquid-crystal display apparatus, comprising:

a first substrate 5 having:

a first substrate terminal 7 located adjacent to a first edge of said first substrate, and a first electrode pattern 6 electrically connected to said first substrate

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terminal and which is arranged so as to extend from said first substrate terminal toward a second edge of said first substrate opposing said first edge;

a second substrate 1 having:

a first input terminal 9 located adjacent to a first edge of said second substrate,

a second substrate terminal 8 formed at a central portion of said edge and electrically connected to said first input terminal and which is arranged so as to extend inboard from said first input terminal along said second substrate,

a second input terminal 4 located adjacent to said first edge of said first substrate and having a first portion flanking one side of said first input terminal and a second portion flanking another side of said first input terminal, and

a second electrode pattern 2, electrically connected to said second input terminal, and

a sealing member 10;

wherein said first substrate and said second substrate are located in an opposed manner through said sealing member so that said first electrode pattern and said second electrode pattern intersect with each other, and

said first substrate terminal and said second substrate terminal are electrically connected to each other with a conductive material 13 between said first and second portions of said second input terminal.

wherein said first substrate terminal for conduction between substrates and said second substrate terminal for conduction between substrates linearly extend toward said second edges of said first and second substrates.

JP'927 discloses a liquid-crystal display apparatus that is basically the same as that recited in claims 1, 7 except for a sealing member having a conductive material. As shown in Figs. 1a and 1b, JP'623 discloses a liquid-crystal display apparatus comprising a driving integrated circuit 115 mounted on a second substrate 107 and an anisotropic conductive sealing member 101 for electrically connecting a transparent electrode 105 and lead-out wiring 111 arranged on a first substrate 103 and the second substrate 107 respectively to facilitate the manufacture and to obtain sufficient conduction between the electrode and the lead-out wiring (see Abstract). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the liquid-crystal display apparatus of JP'927 with the teaching of JP'623 by forming a sealing member having a conductive material so as to facilitate the manufacturing process and to obtain sufficient conduction between the first and second substrate terminals.

5. Claims 3-6 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 56-20927 (JP'927) in view of Kobayashi (USPN 5,959,713).

As shown in Fig. 1, JP'927 discloses a liquid-crystal display apparatus comprising:

a first substrate 5 having:

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a first substrate terminal 7 for conduction between substrates, located adjacent to a first edge of said first substrate, and

a first electrode pattern 6 which is electrically connected to said first terminal and which is arranged so as to extend from said first substrate terminal toward a second edge of said first substrate opposing said first edge; and

a second substrate 1 having:

a first input terminal 9 for receiving input from an outside, located adjacent to a first edge of said second substrate,

a second substrate terminal 8 for conduction between substrates extending essentially perpendicular to said first edge and disposed at a central portion of said first edge, said second substrate terminal arranged so as to extend inboard from said first input terminal along said second substrate, and

a second electrode pattern 2 having a first portion flanking one side of said second terminal and a second portion flanking another side of said second terminal,

wherein said first and second substrates are located in an opposed manner so as to extend in a direction in which said first electrode pattern and said second electrode pattern intersect with each other; and

wherein said first terminal for conduction between substrates and said second terminal for conduction between substrates linearly extend toward said second edges of said first and second substrates.

JP'927 discloses a liquid-crystal display apparatus that is basically the same as that recited in claim 4 except for a driving IC and a conductive material sandwiched between said first substrate and said second substrate for electrically connecting said first substrate terminal and said second substrate terminal. As shown in Figs. 3 and 4, Kobayashi discloses a liquid-crystal display apparatus comprising a first substrate terminal 8 and a first electrode pattern formed on a first substrate 1; and a first input terminal 12, a second electrode pattern 7a and a second substrate terminal 21 formed on a second substrate 2,

wherein a driving IC 13 is mounted on the second substrate, said driving IC has an input terminal electrically connected to said first input terminal, and an output terminal 11 being electrically connected to said second terminal for conduction between substrates and said second electrode pattern, and

wherein said first substrate terminal 8 and said second substrate terminal 21 are electrically connected to each other by a conductive material 31 sandwiched between said first substrate and said second substrate as shown in Fig. 7 (col. 6, lines 6-35).

wherein image data is supplied to said first electrode pattern, and a scanning signal is supplied to said second electrode pattern (col. 6, lines 36-46).

As known in the art, due to increasing the density of the liquid crystal element, driving ICs are used in a so-called COG technology to constitute the complicated circuits in the display. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the liquid-crystal display apparatus of JP'927 with the teaching of Kobayashi by employing a driving IC mounted on the

second substrate, and arranging wiring pattern such that said driving IC has an input terminal being electrically connected to the first input terminal 9, and an output terminal being electrically connected to the second substrate terminal 8 so as to simplify the circuits of the display.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thoi V. Duong whose telephone number is (703) 308-


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3171. The examiner can normally be reached on Monday-Friday from 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim, can be reached at (703) 305-3492.

Thoi Duong

02/22/2003


ROBERT M. KIM
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